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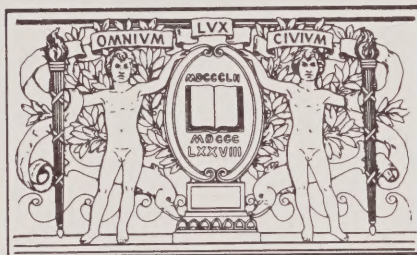
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Results of the 1985 Household Survey

IV. Household Composition

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City of Boston Raymond L. Flynn, Mayor
Boston Redevelopment Authority Stephen Coyle, Director

Boston at Mid-Decade
Results of the 1985 Household Survey
IV. Household Composition

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August 1987

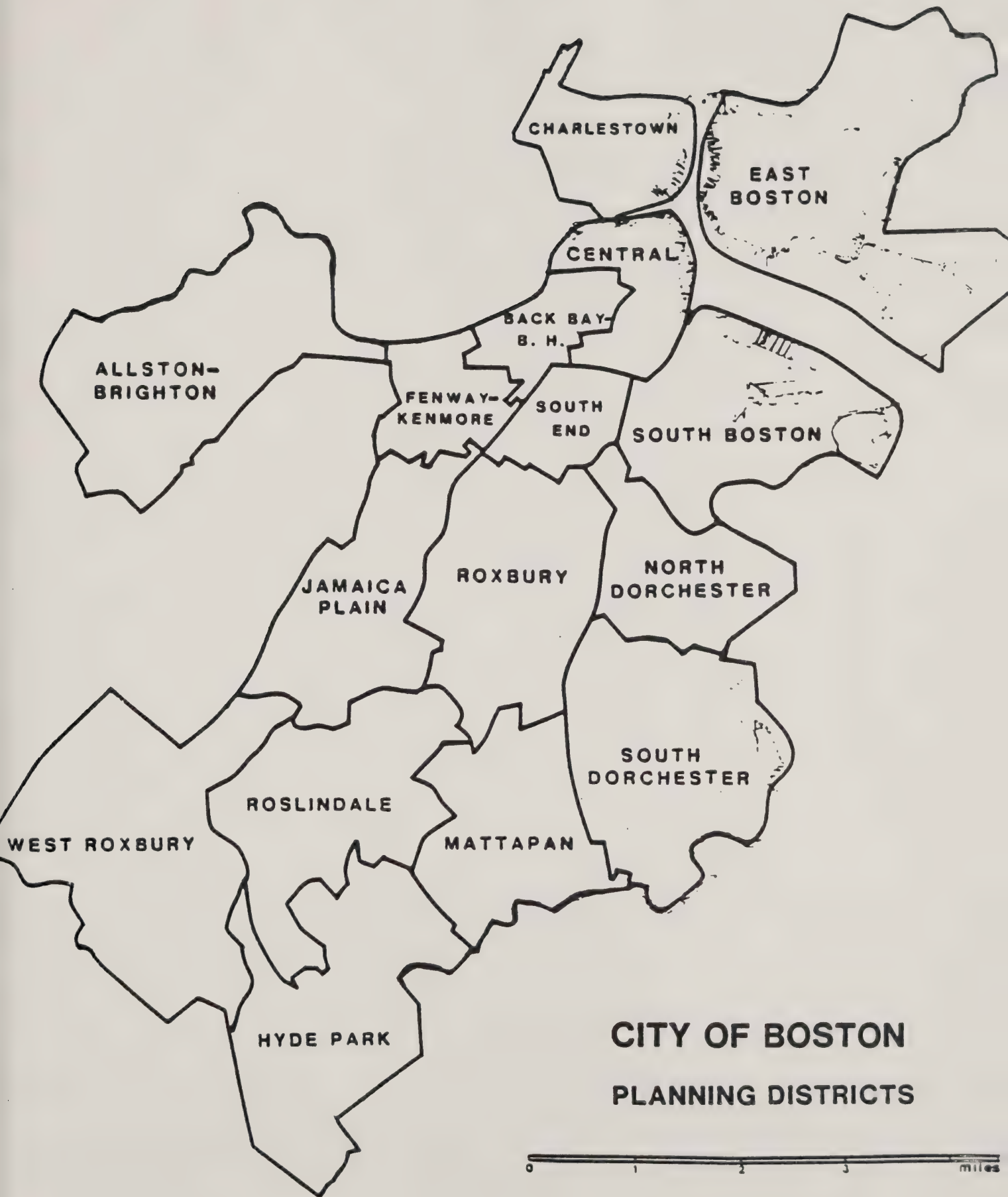
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CITY OF BOSTON
PLANNING DISTRICTS

Abstract

The composition of Boston's households changed dramatically between 1970 and 1980, with the proportion of non-family households increasing from 35 to 47 percent of the total. During the same period, the proportion of married couple households containing children declined from 24 to 18 percent of all households while female-headed families with children grew from 7 to 10 percent of the total. Various neighborhoods of the city showed differences from the 1980 composition and 1970-1980 changes. The East Boston/South Boston/Charlestown area tended to most resemble the city total while Central/Back Bay-Beacon Hill/South End and Fenway/Kenmore had larger proportions of non-family households and Dorchester/Mattapan, Jamaica Plain/Roxbury, and Roslindale/West Roxbury/Hyde Park tended to have larger proportions of family households. Since 1980, the household composition has tended to stabilize rather than continue its rapid change.

While Boston will continue to house large numbers of non-family households, as it and other large cities always have, the aging of the Baby Boom into the age of family formation may be reversing some of the tendency toward growth in the proportion of non-family households, a trend brought about in large part by the very same Baby Boom some ten years ago.

Table of Contents

	Page
Map	i
Abstract	iii
Household Characteristics	
Boston	1
Race and Hispanic Origin	3
Neighborhoods	5
Footnotes	7
Household Composition Tables	9
Appendix A: Definitions and Explanations of Terms Used in the Household Survey	23
Appendix B: Methodology, Sampling Procedure and Statistical Error of the Boston Household Survey	27

The 1985 Household Survey provides information about the composition of households in Boston. It shows a stabilization of the ratio of family and non-family households between 1980 and 1985 after the strong trend between 1970 to 1980 away from family to non-family households. Family households contain two or more persons who are related by blood, marriage or adoption. Non-family households are those occupied by one person living alone or by two or more unrelated individuals.

The 1985 Household Survey data are based on in-house interviews with a representative sample of Boston's households, as described in Appendix B. Group quarters, such as dormitories, fraternities, nursing homes, and rooming houses, were not included in the survey sample. Therefore, the information presented here refers to the composition of households in 1985. The 1970 and 1980 U.S. Census data shown are comparable in that they refer to households only and not to group quarters.

Between 1970 and 1980, the proportion of family households in Boston declined from 65 percent to 53 percent as shown in Table 1. Non-family households increased, in complementary fashion, from 35 to 47 percent. In this ten-year period, the ratio of family to non-family households had declined from roughly 2 to 1 to approximately 1 to 1 and remained there through 1985.

Most household types tended to stabilize at 1980 proportions of all households in Boston. Households composed of married couples and of married couples with children may have increased slightly to 35 percent and 17 percent, respectively, of all households in 1985 from 33 percent and 15 percent, respectively, of 1980 households. Other family households remained at about 19 percent of the total, with 15 percent headed by females and 9 percent female-headed, single parent families.

Among non-family households, the proportions which various types formed

of the total tended to stabilize also. One-person households comprised 35 percent of all households in 1985, while multi-person non-families formed 11 percent of the total. The proportion of male and female-headed households in both single and multi-person households remained about the same in 1985 as it had been in 1980. See Table 1.

The 1970-1980 trend toward non-family households in Boston was somewhat stronger than the trend nationwide. The proportion that non-family households formed of all households increased from 35 to 47 percent compared to an increase from 19 to 26 percent nationwide. Boston, like other large cities, typically had a higher proportion of non-family households than did the remainder of the country. Cities like Boston tend to attract single, young people more than do suburbs and rural areas.

In contrast to the 1970-1980 nationwide trend toward non-family households, the numbers of both family and non-family households have increased since 1980. Therefore, the growth in the proportion of non-family households has slowed considerably with non-family households increasing from 26 percent to 27 percent of the total between 1980 and 1984.¹ This change in trend was fueled by the aging of the last and largest cohorts of the Baby Boom out of the age groups in which most adults are unmarried into those with a higher proportion of married persons.

In Boston, it appears that the trend toward non-family households has ended in the years since 1980. The virtually stable proportion of family households, 53 percent in 1980 and 54 percent in 1985, is replicated by the findings of the 1981 Annual Housing Survey which indicate that 54 percent of Boston's households were occupied by families.² Indeed, the distribution of households by type from the Household Survey and the Annual Housing Survey are very similar adding validity to the Household Survey results.

A number of factors have affected these national and local changes. The aging of the large Baby Boom cohorts of the post-World War II era, mentioned above, is doubtless the most important. The slowing of the divorce rate nationally while the number of marriages is rising is also important. Indeed, the growth in the number of female-headed, single parent families has slowed in the last several years also.³ These trends have tended to bolster the proportion of married couple families among all households in Boston from 33 to 35 percent between 1980 and 1985, while the proportions which were one-person households and female-headed, single parent families declined slightly.

Household composition varied according to the race and Hispanic origin of household head. Forty-eight percent of households headed by whites contained families compared to 68 percent of households headed by blacks and 61 percent of households headed by those of either other racial groups or those of Hispanic origin, seen in Table 2. There was no significant difference in the proportion of married couple households among white, black and other minority headed households. However, the proportions of married couple households with minor children were somewhat smaller among white households (16 percent) than among black (20 percent) and other (22 percent) households, given the higher proportion of children among black and other minority groups than among whites, as seen in "Boston at Mid-Decade, Volume I. Demographic Characteristics".

However, even larger differences among racial groups are seen in the "other family" categories. "Other family" includes family members living together who are related by blood or adoption that do not contain a married couple. Examples would be parent and child, siblings living together, or head and aging relative. See Appendix A. Only 12 percent of white households were

"other families," while 35 percent of black households, and 27 percent of households headed by other minorities, were. Most of these other family households were headed by women, as seen in Table 2. Among white female-headed other families, less than half (44 percent) contained children under 18 years. For minority female-headed other families, the proportion with minor children exceeded two-thirds for blacks, and three-fourths for other minorities. Nearly one-in-five black or other minority household contained a female-headed, single parent family.

There was a striking divergence among white, black and other minority groups with respect to the composition of non-family households also. Overall, Boston's non-family households comprised 46 percent of all households. However, more than half of white headed households, 52 percent, were non-families, compared to 32 percent of black headed households, and 39 percent of those headed by other minorities. One-out-of-three households citywide contained a one-person household. There were differences between the racial groups with one-person households forming 39 percent of all households headed by whites, 27 percent of those headed by blacks, and 26 percent of those headed by other minorities. Large differences also existed among these three groups with regard to the proportion of households containing two or more unrelated persons. Fully 13 percent of white headed and other minority households contained two or more unrelated persons, reflecting large numbers of roommate households among young adults. This contrasts with 5 percent among black-headed households.

Neighborhoods

Boston's neighborhoods showed considerable variability with regard to household composition as seen in Tables 3 through 9. The combined neighborhoods of East Boston, South Boston and Charlestown had a household composition that closely resembled that of Boston in 1985 with two exceptions. First, proportionately more households were headed by persons 65 years and older, 18 percent as opposed to 9 percent citywide. Secondly, proportionately fewer roommate households existed in these neighborhoods. Six percent of all households were occupied by two or more unrelated individuals compared to 11 percent throughout Boston.

Boston's other neighborhood areas showed considerable differences from the city distribution of households by type. Two sets of grouped neighborhoods, Central/Back Bay-Beacon Hill/South End and Fenway-Kenmore/Allston-Brighton had in excess of 70 percent non-family households, with half of all households occupied by persons living alone. Family households comprised just under 30 percent of households in these areas. Married couples headed some 20 percent of households. Some 10 percent of households, whether headed by a married couple or a single parent, contained children under 18 years old. The trend away from family toward non-family households since 1970 has been dramatic in Fenway-Kenmore/Allston-Brighton.

The shift toward non-family households has been much less pronounced in other city neighborhoods and appeared to have halted in the early 1980s. Over 60 percent of households in Roxbury/Jamaica Plain contained families in 1985 as did three-fourths of households in Dorchester/Mattapan and Roslindale/West Roxbury/Hyde Park. Jamaica Plain/Roxbury had a fairly even split of its family households between married couples (34 percent) and other families (29 percent). The 41 percent of Jamaica Plain/Roxbury households containing

children were also evenly split between married couple (20 percent) and other family (21 percent) households. Progressively larger proportions of households containing children were married couple and smaller proportions were other family households in Dorchester/Mattapan and Roslindale/West Roxbury/Hyde Park. Since these areas have traditionally housed proportionately more families, it is not surprising that they would continue to do so. Indeed, these two sets of grouped neighborhoods showed an increase in the proportion of family households between 1980 and 1985.

FOOTNOTES

1. U.S. Bureau of the Census, Current Population Reports, Population Characteristics, P-20 No. 398, "Household and Family Characteristics: March 1984."
2. U.S. Department of Commerce and Department of Housing and Urban Development, Annual Housing Survey: 1981; Boston, Mass. Standard Metropolitan Statistical Area, H170-81-3.
3. U.S. Bureau of the Census, Current Population Reports, Population Characteristics, P-20 No. 411, "Household and Family Characteristics: March 1985."

Household Composition Tables

Table 1. Composition of Boston Households,
1970, 1980, 1985
(in percent)

	<u>1985</u>	<u>1980</u>	<u>1970</u>
All Occupied Households	100	100	100
Family	54 (2)	53	65
Married couple	35 (1)	33	47
with children under 18	17 (1)	15	24
Other family	19 (1)	20	18
Male householder	3 (1)	3	3
with children under 18	1 (*)	1	1
Female householder	15 (1)	16	15
with children under 18	9 (1)	10	7
Non-family	46 (2)	47	35
One person	35 (1)	37	29
Male householder	15 (1)	16	11
Female householder	20 (1)	21	18
65 years or more	9 (1)	11	10
Two or more persons	11 (1)	10	6
Male householder	5 (1)	5	3
Female householder	6 (1)	4	3
65 years or more	* (*)	1	1

Note: 1985 based on 1,302 observations (weighted).
Standard error of proportion shown in parenthesis indicates range around the sample estimate within which the true value lies given the sample size.
Neither the Household Survey nor the census data include information about group quarters.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.

U.S. Bureau of the Census, Census of Population and Housing, STF 1, 1980 and First Count, 1970.

* Less than 0.5 percent

Table 2. Household Composition by Race and
Hispanic Origin of Household Head, 1985
(in percent)

	<u>White Non-Hispanic</u>	<u>Black</u>	<u>Other Minority</u>	<u>All Households</u>
All Occupied Households	100	100	100	100
Family	48 (2)	68 (3)	61 (4)	54 (2)
Married couple	36 (2)	33 (3)	34 (4)	35 (1)
with children 18 and over	5 (1)	4 (1)	3 (2)	5 (1)
with children under 18	16 (1)	20 (3)	22 (4)	17 (1)
Other family	12 (1)	35 (3)	27 (4)	19 (1)
Male householder	3 (1)	6 (2)	4 (2)	3 (1)
with children 18 and over	1 (*)	1 (1)	2 (1)	* (*)
with children under 18	1 (*)	2 (1)	2 (1)	1 (*)
Female householder	9 (1)	29 (3)	23 (4)	15 (1)
with children 18 and over	3 (1)	6 (2)	4 (2)	3 (1)
with children under 18	4 (1)	20 (3)	18 (3)	9 (1)
Non-family	52 (2)	32 (3)	39 (4)	46 (2)
One person	39 (2)	27 (2)	26 (3)	35 (1)
Male householder	16 (1)	12 (2)	13 (3)	15 (1)
Female householder	22 (2)	15 (2)	13 (3)	20 (1)
Two or more persons	13 (1)	5 (1)	13 (3)	11 (1)
Male householder	5 (1)	3 (1)	6 (2)	5 (1)
Female householder	7 (1)	2 (1)	7 (2)	6 (1)
N	868	274	154	1,295

Note: Based on 1,295 observations (weighted).
Standard error of proportion in parenthesis.
Other includes Asian, Native American, other
racial groups, and those of Hispanic origin.

Source: Boston Redevelopment Authority and Neighborhood
Development and Employment Agency Household Survey,
conducted by Center for Survey Research, 1985.

* Less than 0.5 percent

Table 3. Household Composition of Boston and Its Neighborhoods: 1985, 1980, 1970
(in percent)

Districts	Head and Spouse		Head, No Spouse		Non-Family		Total	N
	No Others	Children and Others	Other Relatives	Children	One Person	Two or More Person		
East Boston/ Charlestown/ South Boston	21 (3)	16 (3)	11 (3)	10 (3)	36 (4)	6 (2)	100	171
Central/Back Bay- Beacon Hill/ South End	15 (3)	5 (2)	4 (1)	5 (2)	55 (4)	16 (3)	100	209
Fenway-Kenmore/ Allston-Brighton	13 (2)	9 (2)	4 (1)	2 (1)	50 (3)	22 (3)	100	266
Jamaica Plain/ Roxbury	14 (3)	20 (3)	8 (2)	21 (3)	28 (3)	9 (2)	100	208
North Dorchester/ South Dorchester/ Mattapan	16 (3)	26 (3)	17 (3)	16 (3)	20 (3)	5 (2)	100	249
Roslindale/ West Roxbury/ Hyde Park	32 (4)	28 (3)	11 (2)	6 (2)	20 (3)	4 (2)	100	200
Boston 1985	18 (1)	17 (1)	9 (1)	10 (1)	35 (1)	11 (1)	100	1,302
1980	18	15	9	11	37	10	100	
1970	23	24	10	8	29	6	100	

Note: Children are defined as those aged 17 or younger.
May not sum to 100% due to rounding.
Based on 1,302 observations (weighted).
Standard error of proportion in parenthesis.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985; U.S. Census of Population 1970, 1980.

Table 4. Composition of Households
in East Boston, South Boston, and
Charlestown, 1970, 1980, 1985
(in percent)

	<u>1985</u>	<u>1980</u>	<u>1970</u>
All Occupied Households	100	100	100
Family	58 (4)	61	73
Married couple	37 (4)	39	52
with children under 18	16 (3)	18	28
Other family	21 (3)	21	20
Male householder	4 (2)	4	4
with children under 18	1 (1)	1	1
Female householder	17 (3)	17	16
with children under 18	9 (2)	10	8
Non-family	42 (4)	39	27
One person	36 (4)	36	
Male householder	13 (3)	14	
Female householder	22 (3)	22	
65 years or more	18 (3)	14	
Two or more persons	6 (2)	3	
Male householder	2 (1)	2	
Female householder	4 (2)	1	
65 years or more	1 (1)	*	

Note: 1985 based on 174 observations (weighted).
Standard error of proportion in parenthesis.

The 1970 U.S. Census gives information for non-family households by sex, but does not separate single persons from two or more person households.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.

U.S. Bureau of the Census, Census of Population and Housing, STF 1, 1980 and First Count, 1970.

* Less than 0.5 percent

Table 5. Composition of Households
in Central, Back Bay-Beacon Hill,
and South End, 1970, 1980, 1985
(in percent)

	<u>1985</u>	<u>1980</u>	<u>1970</u>
All Occupied Households	100	100	100
Family	29 (3)	31	35
Married couple	20 (3)	21	26
with children under 18	5 (2)	8	10
Other family	9 (2)	9	9
Male householder	2 (1)	2	2
with children under 18	1 (1)	1	*
Female householder	7 (2)	7	7
with children under 18	4 (1)	4	3
Non-family	71 (3)	69	65
One person	55 (4)	56	
Male householder	26 (3)	28	
Female householder	28 (3)	27	
65 years or more	7 (2)	10	
Two or more persons	16 (3)	13	
Male householder	8 (2)	8	
Female householder	8 (2)	5	
65 years or more	* (*)	5	

Note: 1985 based on 209 observations (weighted).
Standard error of proportions in parenthesis.

The 1970 U.S. Census gives information for non-family households by sex, but does not separate single persons from two or more person households.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.

U.S. Bureau of the Census, Census of Population and Housing, STF 1, 1980 and First Count, 1970.

* Less than 0.5 percent

Table 6. Composition of Households in
Fenway-Kenmore and Allston-Brighton,
1970, 1980, 1985
(in percent)

	<u>1985</u>	<u>1980</u>	<u>1970</u>
All Occupied Households	100	100	100
Family	28 (3)	31	70
Married couple	22 (3)	22	44
with children under 18	9 (2)	8	24
Other family	6 (2)	9	27
Male householder	1 (1)	2	4
with children under 18	* (*)	*	1
Female householder	5 (1)	7	23
with children under 18	2 (1)	3	16
Non-family	72 (3)	69	30
One person	50 (3)	46	
Male householder	24 (3)	19	
Female householder	26 (3)	27	
65 years or more	8 (2)	11	
Two or more persons	22 (3)	23	
Male householder	7 (2)	12	
Female householder	15 (2)	11	
65 years or more	* (*)	*	

Note: 1985 based on 267 observations (weighted).
Standard error of proportion in parenthesis.

The 1970 U.S. Census gives information for non-family households by sex, but does not separate single persons from two or more person households.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.

U.S. Bureau of the Census, Census of Population and Housing, STF 1, 1980 and First Count, 1970.

* Less than 0.5 percent

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Table 7. Compositon of Households
in Jamaica Plain and Roxbury,
1970, 1980, 1985
(in percent)

	<u>1985</u>	<u>1980</u>	<u>1970</u>
All Occupied Households	100	100	100
Family	63 (4)	62	70
Married couple	34 (4)	29	44
with children under 18	20 (3)	15	24
Other family	29 (3)	33	27
Male householder	5 (2)	4	4
with children under 18	2 (1)	2	1
Female householder	24 (3)	28	23
with children under 18	19 (3)	22	16
Non-family	37 (4)	38	30
One person	28 (3)	30	
Male householder	8 (2)	13	
Female householder	20 (3)	17	
65 years or more	9 (2)	9	
Two or more persons	9 (2)	8	
Male householder	5 (2)	5	
Female householder	4 (1)	4	
65 years or more	* (*)	1	

Note: 1985 based on 212 observations (weighted).
Standard error in parenthesis.

The 1970 U.S. Census gives information for non-family households by sex, but does not separate single persons from two or more person households.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.

U.S. Bureau of the Census, Census of Population and Housing, STF 1, 1980 and First Count, 1970.

* Less than 0.5 percent

Table 8. Composition of Households in
North Dorchester, South Dorchester,
and Mattapan, 1970, 1980, 1985
(in percent)

	<u>1985</u>	<u>1980</u>	<u>1970</u>
All Occupied Households	100	100	100
Family	75 (3)	70	80
Married couple	42 (3)	41	56
with children under 18	26 (3)	23	31
Other family	33 (3)	29	23
Male householder	5 (2)	5	4
with children under 18	1 (1)	2	1
Female householder	28 (3)	24	19
with children under 18	15 (2)	17	11
Non-family	25 (3)	30	20
One person	20 (3)	25	
Male householder	11 (2)	10	
Female householder	9 (2)	15	
65 years or more	5 (2)	9	
Two or more persons	5 (2)	5	
Male householder	3 (1)	3	
Female householder	2 (1)	2	
65 years or more	1 (1)	*	

Note: 1985 based on 249 observations (weighted).
Standard error of proportion in parenthesis.

The 1970 U.S. Census gives information for non-family households by sex, but does not separate single persons from two or more person households.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.

U.S. Bureau of the Census, Census of Population and Housing, STF 1, 1980 and First Count, 1970.

* Less than 0.5 percent

Table 9. Composition of Households in
Roslindale, West Roxbury, and
Hyde Park, 1970, 1980, 1985
(in percent)

	<u>1985</u>	<u>1980</u>	<u>1970</u>
All Occupied Households	100	100	100
Family	76 (3)	70	83
Married couple	60 (4)	52	67
with children under 18	28 (3)	23	34
Other family	17 (3)	18	16
Male householder	4 (2)	4	3
with children under 18	* (*)	1	1
Female householder	12 (3)	15	12
with children under 18	6 (2)	7	4
Non-family	24 (3)	30	17
One person	20 (3)	26	
Male householder	5 (2)	7	
Female householder	15 (3)	18	
65 years or more	8 (2)	13	
Two or more persons	4 (2)	4	
Male householder	1 (1)	2	
Female householder	3 (1)	2	
65 years or more	* (*)	*	

Note: 1985 based on 200 observations (weighted).
Standard error of proportion in parenthesis.

The 1970 U.S. Census gives information for non-family households by sex, but does not separate single persons from two or more person households.

Source: Boston Redevelopment Authority and Neighborhood Development and Employment Agency Household Survey, conducted by Center for Survey Research, 1985.

U.S. Bureau of the Census, Census of Population and Housing, STF 1, 1980 and First Count, 1970.

* Less than 0.5 percent

Appendices

Appendix A

DEFINITIONS AND EXPLANATIONS
OF TERMS USED IN
THE HOUSEHOLD SURVEY

Definitions of population and household characteristics are adapted from or are the same as those used by the U.S. Bureau of the Census. All characteristics of individual persons and housing units are given by respondents. The only exceptions to this are for the types of appliances in the kitchen, how modern the kitchen is, the number of units in the building, and exterior condition of the housing. These characteristics are reported by the individual conducting the interview.

GEOGRAPHY

Neighborhood - The term neighborhood refers to one of sixteen BRA Planning districts in Boston.

Boston Metropolitan Area - The Boston metropolitan or "metro" area consists of towns and cities surrounding Boston which are socially and economically integrated with Boston. The metro area, as used in the survey, is the Boston Standard Metropolitan Statistical Area as it was defined in 1980.

CHARACTERISTICS OF PERSONS

Race - The categories of race in the 1980 and 1985 Household Survey include Black, Asian, Native American, Hispanic, and White, not Hispanic. Respondents were asked, "Which of these [categories] best describe person's background -- black, Asian, Hispanic, white, Native American, or something else?" This is not comparable to the 1970 and 1980 U.S. Census which asked two separate questions, the first identifying race and the second identifying Hispanic status. In addition to self-designated Hispanics, persons of other races in the Survey were moved to Hispanic from their initial category if they spoke Spanish at home or were born in a Spanish-speaking country.

Non-White - This category includes persons who designated themselves to be Black; Asian, including Chinese, Japanese, etc.; American Indian; Cape Verdean; or mixed racial background or other non-white.

Minority - Individuals were classified minority if they designated themselves to be Black, Oriental, American Indian, Cape Verdean, of mixed racial background, or other non-white (all of which are included in non-white) or Hispanic.

Ethnicity - Ethnicity is determined by the country of origin of a person's family. The question asks, "From what country or part of the world did most of (PERSON'S) family come from originally?" A Black person might answer, Africa or Jamaica. A person whose parents came from different countries, for example, Ireland and Poland, would answer whichever country (most of his or her family came from, or whichever) seem most appropriate. The information obtained from this question is compatible with 1980 Census information.

Handicapped - A person is defined as handicapped if he or she has health problem that limits the amount or kind of work he or she can do. Respondents could then indicate the type of condition and whether or not the person has had the condition for three months.

HOUSEHOLD, FAMILY AND UNRELATED INDIVIDUAL

Household - A household includes all the persons who occupy a group of rooms or a single room which constitutes a housing unit. These residents may be related to each other (a family) or be unrelated individuals who share the unit.

Family Unit - A family unit consists of two or more persons related by blood, marriage or adoption. A single individual living alone or with unrelated persons is also considered a family unit.

Family - A family is a family unit which contains two or more family members.

Unrelated Individual - An unrelated individual is a member of a household who is not related to any other household member by blood or marriage, e.g., a person living alone, sharing a house or apartment with other unrelated individuals, or a boarder in a home.

Head of Family Unit - The head of a family unit is defined by policy as (1) the only adult, (2) husband of a married couple, (3) the person whose age is closest to 45 years.

Head of Household - The head of a household is the head of the first family the respondent mentions.

EMPLOYMENT STATUS

Employed - A person is considered employed if he/she is 16 years and over and was either working during the week before the interview or was on paid leave, or was working at least fifteen hours a week without pay in a family business, or was on temporary lay-off from a job due to lack of work.

Unemployed - A person 16 years and over who is not employed for pay but has been seriously looking for work during the previous four weeks and is available to accept a job. In addition, persons who have jobs which have not yet started are considered unemployed.

Labor Force - The labor force includes all persons 16 years of age and over who are either employed (including members of the Armed Forces) or unemployed.

Not in the Labor Force - All persons 16 years and over who are not classified as employed or unemployed are defined as not in the labor force. This category consists of retired workers, homemakers, students and ill or disabled persons.

Labor Force Participation Rates - Labor force participation rates are determined by summing all labor force participants in a particular population, and dividing by the total number of persons 16 years and over in that population.

Industry - The industry in which a person works is the kind of organization or business in which he is employed--for example, a hospital, construction firm, or a government agency. The Standard Industrial Code (SIC) is used to categorize employing organizations.

Occupation - An occupation is the kind of work a person does, for example, clerical work, welding, or sales. The 1980 Census occupational code is used as the basis for classifying types of jobs.

ECONOMIC CHARACTERISTICS

Family Income - Family income is the total of the income from all sources that flows to all family members.

Unrelated Individual Income - The income of a single person.

Household Income - The combined income of all single people and families occupying a housing unit.

Source of Income - One of numerous specified categories contributing at least \$500 per year to family income. The categories are wages and salaries; income from property; transfer payments; alimony; child support; gifts; pension or annuity; scholarship or fellowship; inheritance or life insurance; and gambling or lottery.

Poverty Status - A family or single person (unrelated individual) is defined as being poor if individual income is below the Bureau of the Census Poverty Guidelines. Because family units and individuals were not asked to report their exact income in the survey, but rather to select an income category in which their 1979 income fell, it is impossible to be precise in assigning families and persons to low-income status. Below is a table presenting family unit size, low-income threshold, and the income cut-off used in the survey.

<u>Family Size</u>	<u>Poverty Jan. 85 Guideline</u>	<u>Survey Poverty Category</u>
1 Person	\$ 5,280	\$ 5,999 or less
2 Persons	6,760	6,999 or less
3 Persons	8,280	7,999 or less
4 Persons	10,610	9,999 or less
5 Persons	12,560	12,499 or less
6 Persons	14,210	
7 Persons	16,160	14,999 or less
8 Persons	17,900	
9 Persons or more	21,170	19,999 or less

HOUSING CHARACTERISTICS

Housing Unit - A housing unit is a home or apartment.

Number of Rooms in Housing Unit - The total number of rooms in a housing unit excludes bathrooms, porches, halls, and unfinished rooms in the basement or attic.

Rental Payment - Rental payment is the monthly dollar amount spent by a family unit for apartment rent, including heat.

Contract Rent - Contract rent is the monthly rent agreed to or contracted by a household unit, regardless of any furnishings, utilities or services that may be included.

Gross Rent - Gross rent is the monthly rent agreed to or contracted by a household unit regardless of any furnishings, but includes heat, natural gas and electricity.

Appendix B

METHODOLOGY, SAMPLING PROCEDURE AND STATISTICAL ERROR
OF THE BOSTON HOUSEHOLD SURVEY

The Boston Household Survey was conducted by the Center for Survey Research of the University of Massachusetts for the Boston Redevelopment Authority during the late winter and spring of 1985. Its purpose was to provide up-to-date, specific and accurate information about persons living in households in the City of Boston and its neighborhoods. Planners and program administrators within city government, executives and decision makers in both the public and private sectors, and researchers have all needed updated information. The main source of information on the characteristics of Boston households has been the decennial U.S. censuses. Therefore, the survey results will provide much needed information in the interim as well as additional information not available from the U.S. Census.

The advantage of a sample survey is that timely information can be gathered quickly and relatively inexpensively. However, because the information is received from a sample of Boston's population rather than the entire population, the results are subject to statistical error. Statistical error is a measure of the degree of uncertainty or, obversely, the level of confidence that should be associated with the survey results. Throughout this report error will mean statistical error, as opposed to mistakes.

This report provides a brief description of the survey methodology. It indicates how the sample was chosen, some of the measures used to ensure a high response rate, and the resulting sample sizes. It also indicates some of the limitations of this survey, and surveys in general.

The Boston Household Survey was designed and conducted so as to obtain information that is representative, relevant, accurate, and reliable as well as timely. The questionnaire was carefully worded and standardized to ensure that each interviewer asked exactly the same questions of each respondent.

The households interviewed were chosen by a stratified two-stage cluster sampling process.¹ In the first stage, the nearly quarter of a million housing units (and all the land area) were assigned to one of three groups: BHA public housing, major new construction (50 or more units) built since the 1980 Census, and all of the remaining housing and land area. These groups were further divided into "sampling units" or "blocks" with a minimum of 25 units in each. Sampling proceeded by choosing nearly 300 of these sampling units and an average of 6.7 housing units, chosen systematically, in each which yielded clusters of just under 5 responding units on average.

The second stage called for giving every housing unit within the city limits of Boston a one in 120 chance of being selected in the sample. This was carefully worked out so that, in fact, the joint probability of selecting a block times the probability of selecting a housing unit from that block was 1 in 120.

¹ More detailed information about the sampling process can be obtained from the Center for Survey Research.

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A critical goal of the study was to produce estimates for each of 16 planning districts or areas used by the Boston Redevelopment Authority and 18 areas used by NDEA. Because of this goal, the initial selection of blocks was stratified by Neighborhood Statistical Area (NSA), a small geographic unit out of which both sets of planning areas can be formed. In this way, it was ensured that the portion of the total sample that came from each NSA would be in the correct proportion to the city total and not subject to normal sampling variability. This feature of the sampling design reduces the sampling error associated with city-wide estimates.

When a probability of 1 in 120 was applied across each of the planning districts, it was found that several areas would have too few interviews for reliable descriptions because of their small population size. Therefore, households in Charlestown, Franklin Field, and Mission Hill were selected at two times the rate of households in the rest of the city. To help defray costs, households in Allston-Brighton (a comparatively large area) were sampled at 1/2 the rate of the rest of the city. The result of the decision was to strengthen our ability to describe the population in all neighborhood areas. To obtain the overall figures for the city and for areas that cut across planning areas, the sample numbers for each of these four neighborhoods were subsequently weighted by 2 or 1/2 appropriate weights to compensate for the differential probability of selection that reflect the actual proportion of City housing units in those neighborhoods.

The initial selection process produced a list of some 2,064 addresses whose occupants were to be interviewed. No substitutions for any of the selected households were allowed. Of the 2,064 addresses screened, 127 were vacant and 102 were group quarters or nonresidential units. They were not included in the eligible sample of 1,835 occupied units. In these 1,835 occupied housing units were 1,835 families or individual persons and an additional 295 unrelated persons who may have been roommates, lodgers, boarders, etc. Both the head of family unit (family or single person) and any unrelated persons were interviewed. Of the 2,130 potential interviews, 1,625 were completed, 1,491 with household heads and 224 with unrelated persons. This yielded a 76.3% response rate citywide.

Every effort was made to obtain an in-house interview from households chosen for the sample including an advance letter, six personal on-site calls by an interviewer at different times of day, and telephone interview attempts thereafter. The household response rate for neighborhoods varied between 66% and 86%. The sample size goal to yield reliable neighborhood results was 70 completed interviews in each neighborhood. Three neighborhoods had fewer than seventy interviews: Charlestown, North Dorchester, and Roslindale. (See Table 1.)

² Overall sampling rate for households is the probability of the sampling unit being chosen times the probability of the households within the sampling unit being picked.

Table 1. Sample Numbers of Eligible Units and Complete
Interview with Response Rates by Neighborhood
(BRA Planning District)

<u>Planning District</u>	<u>Occupied Housing Units Plus Unrelated Individuals</u>	<u>HH and U.I. Completed Interviews</u>	<u>Response Rate</u>	<u>Persons Reported Interviewed</u>
East Boston	121	88	73%	196
Charlestown	96	68	71	139
South Boston	116	78	67	153
Central	111	82	74	114
Back Bay/Beacon Hill	138	102	74	135
South End	93	74	80	121
Fenway/Kenmore	133	112	84	175
Allston/Brighton	171	143	81	204
Jamaica Plain/Parker Hill	246	188	76	368
Roxbury	198	155	78	377
North Dorchester	85	69	81	177
South Dorchester	174	131	75	353
Mattapan	189	148	78	444
Roslindale	103	68	66	172
West Roxbury	110	76	69	192
Hyde Park	88	76	86	214
	<u>2,130</u>	<u>1,625</u>		<u>3,534</u>

Source: Floyd J. Fowler, Jr., "Final Report: Procedures for Survey of Boston's Neighborhoods", Center for Survey Research, University of Massachusetts - Boston, August 1985; Survey results.

* Numbers of persons in this column have been weighted. Numbers in parentheses are unweighted numbers of persons, the actual number of persons reported.

While this survey was carried out in a careful scientific manner, the user should be aware that there is error inherent in any sample survey results. Therefore, some cautions are necessary in the use and interpretation of these data.

The user must recognize that this is a sample of Boston's housing units and their associated households. As such, it does not include persons in dormitories, jails, convents, nursing homes, and other "group quarters" as well as those with no permanent home. Although the impact of this bias may be small, it is well to bear in mind that this is not a sample of the city's entire population, both for the representativeness of the results and their comparability with other data sources, such as the U.S. Census.

The largest source of error is nonresponse, cited above. Fortunately what information is available about nonrespondents indicates that they do not differ systematically and significantly from respondents except that they are more likely to live alone, to be white, to be under 65 years old, and to have no children living with them. However, we cannot really know in what way the absence of 24% of Boston's family units from our sample biases our results.

Another source of error is sampling error or variability which is due solely to chance. It is the error associated with taking a sample rather than the entire population as the study group. It is akin to the notion of the variability in the number of heads and tails turned up during 100 tosses of a coin. The amount of error associated with a sample percentage depends on both the size of the reported percent and the sample size on which the percent is based. Table 2 indicates the appropriate error for each sample value. The error, in general, declines as the sample values are further from 50% and the sample size increases. The user should not assume that the sample value is exactly the value for the population. The correct interpretation of sample results and the associated error is that the true value for the population lies somewhere within the range of sampling error around the sample value.

For instance, sample survey results indicate that 31 percent of the families living in the Back Bay/Central/South End neighborhoods earn \$50,000 or more a year. Because this proportion is based on a sample, it is uncertain whether or not the actual value is 31 percent. However, we can be almost certain that the true value lies close to this percentage. The calculation of sampling errors in Table 2 helps us to know how close. The 31 percent figure comes from the fraction 19/62. Therefore, we look in Table 2 for the row in which sample size is about 50 and the column in which the reported percent is about 20 or 80 percent. This yields a sample error of 12 percent. From this information, we know that the actual percentage earning \$50,000 or more a year among families in these neighborhoods lies between 19 and 43 percent ($31\% \pm 12\%$). Again, we might want to know the associated sampling error for all families in Boston earning \$50,000 or more, 10 percent, which is based on a size of 634 families citywide. Table 2 tells us that for a reported percentage of 10 percent and a sample size of 634, the sampling error is 3 percent. So the value for families is expected to be no more than 3 percent from the sample value of 10 percent, or between 7 and 13 percent.

This statement about error is not intended to discourage use of survey information. Instead, use of these materials is encouraged; the data included are the most current available and, in some cases, are not obtainable from any other reliable source.

Table 2. Sampling Errors by Sample
Size and Approximate Reported Percentage
for the Boston Study

<u>Sample Size</u>	<u>5 or 95%</u>	<u>10 or 90%</u>	<u>20 or 80%</u>	<u>50%</u>
50	-	-	12	16
75	-	7	10	13
100	-	7	9	11
150	4	5	7	8
175	4	5	7	8
200	3	5	6	8
250	3	4	6	7
300	3	4	5	6
400	2	3	4	6
500	2	3	4	5
750	2	3	4	5

Chances are 95 in 100 that the central value lies within the reported survey value, plus or minus the number of percentage points shown in this table. Errors included here assume average net design effect for clustering and stratification is 1.2.

Source: Floyd J. Fowler, Jr., "Final Report: Procedures for Survey of Boston's Neighborhoods", "Center for Survey Research, University of Massachusetts-Boston, August, 1985.

